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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,133

10/14/2005

Wa Chu

CHU0101PUSA

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EXAMINER

PATEL, NIHIR B

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/553,133	<b>Applicant(s)</b> CHU, WA	
	<b>Examiner</b> NIHIR PATEL	<b>Art Unit</b> 3772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10.04.2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10.14.2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05.26.2006</u>  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in the current application filed on October 14<sup>th</sup>, 2005.

### ***Response to Amendment***

2. The examiner acknowledges the preliminary amendment filed on October 4th, 2006. The preliminary amendment comprises amending claims 1-11 and adding new claims 12-24.

### ***Specification***

3. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

4. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

5. The disclosure is objected to because of the following informalities: The specification should be double spaced.

Appropriate correction is required.

### ***Drawings***

6. New corrected drawings (figures 16-18) in compliance with 37 CFR 1.121(d) are required in this application because to dark cannot see them clearly. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

7. The drawings (figures 16-18) are objected to because the figures are too dark, cannot see them clearly. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be

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necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims **1, 2 and 4-24** are rejected under 35 U.S.C. 102(b) as being anticipated by Hilton (US 4,419,994).

10. **As to claim 1**, Hilton teaches an apparatus that comprises a first portion and a second portion, connecting with each other along at least one common edge **8 (see figure 15)**, flat foldable along the common edge; securing mean **13 and 14** to secure the face mask on the face of a wearer thereby forming an effective respiratory seal as the wearer inhale and release the respiratory seal as the wearer exhale (**see figure 15; col. 4 lines 15-20**); and filtering mean to filter inhaling air (**see col. 6 lines 1-20**).

11. **As to claim 2**, Hilton teaches an apparatus wherein the effective respiratory seal covers a minimum yet essential area of nose, chin and two symmetrical edges connecting (**see figure 15**).

12. **As to claim 4**, Hilton teaches an apparatus wherein the securing mean includes an elastic headband providing holding force at location substantially away from the periphery of the face mask (**see figure 15**).

13. **As to claim 5**, Hilton teaches an apparatus wherein the filtering mean includes the main body of the face mask made of filtering sheet material (**see col. 6 lines 1-20**).

14. **As to claim 6**, Hilton teaches an apparatus wherein the filtering mean includes a filter part integrated in the main body of the face mask (**see col. 6 lines 1-20**).

15. **As to claim 7**, Hilton teaches an apparatus wherein the filtering mean includes a user replaceable filter part (**see col. 6 lines 1-20 and col. 8 lines 40-50**).

16. **As to claim 8**, Hilton teaches a process comprising first step of folding a roll of sheet material along the length of the sheet material; second step of welding the folded sheet material along pre-defined edge; and third step of cutting the shape of the face mask in the flat folded configuration out of the roll of sheet material (**see cols. 3 and 4**).

17. **As to claim 9**, Hilton teaches a process step wherein the roll of sheet material includes at least two layers of construction (**see col. 4**).

18. **As to claim 10**, Hilton teaches a process step of folding a flat sheet material; welding the folded sheet material along a predefined edge and cutting the shape of the face mask in the flat folded configuration out of the sheet material (**see cols. 3 and 4**).

19. **As to claim 11**, Hilton teaches a process step wherein the roll of sheet material includes at least two layers of construction (**see col. 4**).

20. **As to claim 12**, Hilton teaches an apparatus that comprises mask body (**see figure 15**), comprising at least two generally flat parts, made of air-permeable filter media (**see col. 6 lines**

**1-20**), connectable to each other along a vertical, common edge; the mask body being foldable to a first flat configuration for ease of storage and carrying, and capable of being unfolded to a second, convex open configuration for covering the nose and mouth of a wearer (**see figures 1-15**), forming a tent like appearance with the common edge running from the top to the bottom of the mask body (**see figure 15**); the common edge serving to hold the mask body away from the nose and mouth of the wearer; means for filtering inhaled air; means for securing the mask body against the wearer's face imposing a force, along the common edge, substantially away from the periphery of the mask body and at an elevation corresponding to the space between the nose and mouth, and directed toward the face of the wearer; wherein the peripheral portions of the mask body are more flexible to accommodate the face shape and provide a respiratory seal with positive pressure applied from the outside during inhalation, while allowing exhaled air to pass easily through the peripheral flexible portions (**see figure 15**).

21. **As to claim 13**, Hilton teaches an apparatus wherein the means for securing the mask body is an elastic headband or ear loop that contacts the mask body along the common edge, substantially away from the periphery of the mask body and at an elevation that corresponds to the space between the nose and mouth (**see figure 15; col. 4 lines 15-20**).

22. **As to claim 14**, Hilton teaches an apparatus wherein the means for securing the mask body can be attached and released from the mask body by the wearer (**see col. 4 lines 15-20**).

23. **As to claim 15**, Hilton teaches an apparatus wherein stiffeners are incorporated into the mask body from the common edge toward the face in the same elevation as the force applied, reinforcing the mask body where stress is strongest and allowing the rest of the mask body to be more flexible (**see col. 6**).

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24. **As to claim 16**, Hilton teaches an apparatus wherein the means for securing the mask body is fixed onto the mask body, at locations substantially away from the periphery of the face mask and near to the common edge (**see figure 15 and col. 4 lines 15-20**).

25. **As to claim 17**, Hilton teaches an apparatus that comprises mask body (**see figure 15**), comprising at least two generally flat parts, connectable to each other along a vertical common edge (**see figure 15**); the mask body being foldable to a first flat configuration for ease of storage and carrying, and capable of being unfolded to a second, convex open configuration for covering the nose and mouth of a wearer (**see figures 1-15**), forming a tent like appearance with the common edge running from the top to the bottom of the mask body (**see figure 15**); the common edge serving to hold the mask body away from the nose and mouth of the wearer; means for securing the mask body against the wearer's face imposing a force, along the common edge, substantially away from the periphery of the mask body and at an elevation corresponding to the space between the nose and mouth, and directed toward the face of the wearer; wherein the mask body is made of non-permeable material and the means for filtering inhaled air includes at least one filter insert which also functions as a stiffener, the means for filtering inhaled air integrated air in the mask body and the peripheral portions of the mask body are more flexible to accommodate the face shape and provide a respiratory seal with positive pressure applied from the outside during inhalation while allowing exhaled air to pass easily through the peripheral flexible portions (**see cols 3 and 4**).

26. **As to claim 18**, Hilton teaches an apparatus wherein the means for securing the mask body is an elastic headband or ear loop that contacts the face mask along the common edge,



substantially away from the periphery of the face mask and at an elevation that corresponds to the space between the nose and mouth (**see col. 4 lines 15-20**).

27. **As to claim 19**, Hilton teaches an apparatus wherein the means for securing the mask body may be attached and released from the mask body by the wearer (**see figure 15 and col. 4 lines 15-20**).

28. **As to claim 20**, Hilton teaches an apparatus wherein the filter insert can be replaced by the wearer (**see col. 4 lines 15-20 and col. 8 lines 40-50**).

29. **As to claim 21**, Hilton teaches an apparatus wherein the non permeable material comprises any synthetic or natural material with suitable rigidity and flexibility such as paper, plastic or leather (**see col. 6 lines 1-20**).

30. **As to claim 22**, Hilton teaches an apparatus wherein the filter insert comprises a filter sheet media secured between a filter holder which is permanently attached to the mask body and a releasable filter guard (**see col. 6 lines 1-20**).

31. **As to claim 23**, Hilton teaches an apparatus wherein the filter sheet media is fixed onto the filter guard and can be replaced by the wearer (**see col. 6 lines 1-20 and col. 8 lines 40-50**).

32. **As to claim 24**, Hilton teaches an apparatus wherein the means for securing the mask body is fixed onto the mask body, at locations substantially away from the periphery of the face mask and near to the common edge (**see figure 15 and col. 4 lines 15-20**).

### ***Claim Rejections - 35 USC § 103***

33. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

34. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

35. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hilton (US 4,419,994).

36. **As to claim 3**, Hilton substantially discloses the claimed invention; see rejection of claim 1 above, Hilton discloses essential area that is adaptive to an extensive range of face sizes which is defined by eye to chin distance (**see col. 8 lines 10-25**) but does not disclose dimensions within the range from 94 mm to 104 mm. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hilton's invention by providing an essential area that is adaptive to an extensive range of face sizes which is defined by eye to chin distance having dimensions within the range from 94 mm to 104 mm in order to provider the proper fit and comfort to the user, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIHIR PATEL whose telephone number is (571)272-4803. The examiner can normally be reached on 7:30 to 4:30 every other Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on (571) 272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nihir Patel/  
Examiner, Art Unit 3772

/Patricia Bianco/  
Supervisory Patent Examiner, Art Unit 3772

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